

Contents

VOLUME 1

Section I BIOLOGY OF THE NORMAL JOINT

1. BIOLOGY OF THE NORMAL JOINT **1**
 - *Clement B. Sledge*
 - *A. Hari Reddi*
 - *David A. Walsh*
 - *David R. Blake*
 2. COLLAGEN AND ELASTIN **27**
 - *Leena Ala-Kokko*
 - *Darwin J. Prockop*
 3. MATRIX GLYCOPROTEINS,
PROTEOGLYCANS, AND CARTILAGE **41**
 - *Dick Heinegård*
 - *Pilar Lorenzo*
 - *Tore Saxne*
 4. PROTEINASES AND MATRIX
DEGRADATION **55**
 - *Yasunori Okada*
 5. BIOMECHANICS OF JOINTS **73**
 - *Eric L. Radin*
 - *Sheldon R. Simon*
-

Section II IMMUNE AND INFLAMMATORY RESPONSES

6. MACROPHAGES, DENDRITIC CELLS,
AND FOLLICULAR DENDRITIC CELLS **79**
 - *John G. Tew*
 - *Andras K. Szakal*
7. GENETICS OF RHEUMATIC DISEASES **95**
 - *Peter K. Gregersen*
8. T LYMPHOCYTES **113**
 - *Ralph C. Budd*
 - *Karen A. Fortner*
9. B CELLS **131**
 - *Betty Diamond*
 - *Christine Grimaldi*
10. RHEUMATOID FACTOR **151**
 - *Helen Tighe*
 - *Dennis A. Carson*

11. ANTINUCLEAR ANTIBODIES	161
■ <i>Stanford L. Peng</i>	
■ <i>Joe Craft</i>	
12. IMMUNE COMPLEXES	175
■ <i>Willy F. Piessens</i>	
13. COMPLEMENT	185
■ <i>Shaun Ruddy</i>	
14. NEUTROPHILS AND EOSINOPHILS	195
■ <i>Michael H. Pillinger</i>	
■ <i>Steven B. Abramson</i>	
15. PROSTAGLANDINS, LEUKOTRIENES, AND RELATED COMPOUNDS	211
■ <i>Robert B. Zurier</i>	
16. THE MAST CELL	225
■ <i>Lawrence B. Schwartz</i>	
17. ENDOTHELIAL CELLS AND NITRIC OXIDE	239
■ <i>Myron I. Cybulsky</i>	
■ <i>Philip A. Marsden</i>	
■ <i>Ramzi S. Cotran</i>	
18. PLATELETS	255
■ <i>Marcus E. Carr, Jr.</i>	
19. FIBROBLAST FUNCTION AND FIBROSIS	263
■ <i>Joseph H. Korn</i>	
■ <i>Robert Lafyatis</i>	
20. CYTOKINES	275
■ <i>Zoltan Szekanecz</i>	
■ <i>Alisa E. Koch</i>	
21. APOPTOSIS	291
■ <i>Keith B. Elkon</i>	
22. AUTOIMMUNITY	305
■ <i>Brian L. Kotzin</i>	

Section III

EVALUATION OF THE PATIENT

23. EPIDEMIOLOGY OF THE RHEUMATIC DISEASES	321
■ <i>Sherine E. Gabriel</i>	
24. EVIDENCE-BASED RHEUMATOLOGY	335
■ <i>Peter Tugwell</i>	
■ <i>Maarten Boers</i>	
■ <i>Ann Cranney</i>	

25. EXAMINATION OF THE JOINTS	347
■ <i>Kevin G. Moder</i>	
■ <i>Gene G. Hunder</i>	
26. MONARTICULAR ARTHRITIS	367
■ <i>W. Joseph McCune</i>	
■ <i>Joseph Golbus</i>	
27. POLYARTICULAR ARTHRITIS	379
■ <i>John S. Sergent</i>	
28. WEAKNESS	387
■ <i>John S. Sergent</i>	
29. THE EYE AND RHEUMATIC DISEASE	393
■ <i>Denis M. O'Day</i>	
■ <i>Jeffrey D. Horn</i>	
30. THE SKIN	401
■ <i>Nicholas A. Soter</i>	
■ <i>Andrew G. Franks, Jr.</i>	

Section IV MUSCULOSKELETAL PAIN AND EVALUATION

31. FIBROMYALGIA	417
■ <i>Daniel J. Clauw</i>	
32. OCCUPATIONAL AND RECREATIONAL MUSCULOSKELETAL DISORDERS	429
■ <i>Richard S. Panush</i>	
33. SPORTS MEDICINE	439
■ <i>Scott A. Lintner</i>	
■ <i>John A. Feagin, Jr.</i>	
■ <i>Arthur L. Boland</i>	
34. NECK PAIN	457
■ <i>Kenneth K. Nakano</i>	
35. SHOULDER PAIN	475
■ <i>Scott David Martin</i>	
■ <i>Thomas S. Thornhill</i>	
36. LOW BACK PAIN	509
■ <i>Patrick J. Casey</i>	
■ <i>James N. Weinstein</i>	
37. HIP AND KNEE PAIN	525
■ <i>Michael F. Dillingham</i>	
■ <i>N. Nichole Barry</i>	
■ <i>John V. Lannin</i>	
38. ANKLE AND FOOT PAIN	547
■ <i>Tammy L. Martin</i>	
39. TEMPOROMANDIBULAR JOINT PAIN	557
■ <i>Daniel M. Laskin</i>	
40. HAND AND WRIST PAIN	569
■ <i>Carrie R. Swigart</i>	
■ <i>Scott W. Wolfe</i>	

Section V

DIAGNOSTIC TESTS AND PROCEDURES

41. ASPIRATION AND INJECTION OF JOINTS AND SOFT TISSUES **583**
■ *Duncan S. Owen, Jr.*
42. SYNOVIAL FLUID ANALYSIS AND SYNOVIAL BIOPSY **605**
■ *H. Ralph Schumacher, Jr.*
43. IMAGING **621**
■ *Barbara N. Weissman*
■ *Donald Resnick*
■ *Shaifali Kaushik*
■ *Alfred W. Sem*
■ *Joseph S. Yu*
44. ARTHROSCOPY AND SYNOVECTOMY **685**
■ *Terry L. Whipple*
■ *Michael J. Duval*
45. LABORATORY EVALUATION OF INFLAMMATION **697**
■ *Stanley P. Ballou*
■ *Irving Kushner*
46. BIOLOGIC MARKERS **705**
■ *Edward D. Harris, Jr.*
-

Section VI

SPECIAL ISSUES

47. NUTRITION AND RHEUMATIC DISEASES **713**
■ *Joel M. Kremer*
48. PSYCHOSOCIAL MANAGEMENT OF RHEUMATIC DISEASES **729**
■ *Liv Marit Smedstad*
■ *Matthew H. Liang*
49. GERIATRICS AND THE RHEUMATIC DISEASES **735**
■ *Evan Calkins*
50. ALTERNATIVE CARE FOR ARTHRITIS AND RELATED MUSCULOSKELETAL DISEASES **739**
■ *Doyt L. Conn*
■ *J. Roger Hollister*
■ *William J. Arnold*
51. CHRONIC PAIN MANAGEMENT **753**
■ *Don L. Goldenberg*
52. REHABILITATION OF PATIENTS WITH RHEUMATIC DISEASES **763**
■ *Joseph J. Biundo, Jr.*
■ *Perry J. Rush*
53. HEALTH OUTCOME ASSESSMENT **777**
■ *Nicholas Bellamy*
■ *Alison J. Carr*

Section VII

CLINICAL PHARMACOLOGY

54. DEVELOPING A CLINICAL TRIAL DESIGN **789**
■ *Lenore M. Buckley*
■ *Barbara Finck*
55. NONSTEROIDAL ANTI-INFLAMMATORY DRUGS **799**
■ *Ernesto Santana-Sahagún*
■ *Michael H. Weisman*
56. GLUCOCORTICOIDS **823**
■ *C. Michael Stein*
■ *Theodore Pincus*
57. METHOTREXATE **841**
■ *Michael E. Weinblatt*
58. SULFASALAZINE **853**
■ *Richard O. Day*
59. ANTIMALARIAL DRUGS **859**
■ *Richard I. Rynes*
60. GOLD AND PENICILLAMINE **869**
■ *Duncan A. Gordon*
■ *Alice V. Klinkhoff*
61. IMMUNOREGULATORY DRUGS **879**
■ *C. Michael Stein*
62. BIOLOGIC AGENTS FOR THE TREATMENT OF RHEUMATOID ARTHRITIS **899**
■ *C. Vibeke Strand*
■ *Edward Keystone*
63. TETRACYCLINES **913**
■ *Sheldon M. Cooper*
- INDEX **i**

VOLUME 2

Section VIII

RHEUMATOID ARTHRITIS

64. ETIOLOGY AND PATHOGENESIS OF RHEUMATOID ARTHRITIS **921**
■ *Gary S. Firestein*
65. CLINICAL FEATURES OF RHEUMATOID ARTHRITIS **967**
■ *Edward D. Harris, Jr.*

66. TREATMENT OF RHEUMATOID ARTHRITIS 1001
■ *Edward D. Harris, Jr.*
67. FELTY'S SYNDROME 1023
■ *Robert S. Pinals*
68. APPROACHES TO THE TREATMENT OF SJÖGREN'S SYNDROME 1027
■ *Robert I. Fox*
■ *Paul Michelson*
■ *Jyrki Törnwall*
-

Section IX SPONDYLOARTHROPATHIES

69. ANKYLOSING SPONDYLITIS 1039
■ *Sjef van der Linden*
■ *Désirée van der Heijde*
70. REITER'S SYNDROME AND UNDIFFERENTIATED SPONDYLOARTHROPATHY 1055
■ *David Tak Yan Yu*
■ *Peng Thim Fan*
71. PSORIATIC ARTHRITIS 1071
■ *Dafna D. Gladman*
■ *Proton Rahman*
72. ENTEROPATHIC ARTHRITIS 1081
■ *Frank A. Wollheim*
-

Section X SYSTEMIC LUPUS ERYTHEMATOSUS AND RELATED SYNDROMES

73. PATHOGENESIS OF SYSTEMIC LUPUS ERYTHEMATOSUS 1089
■ *Bevra Hannahs Hahn*
74. CLINICAL MANIFESTATIONS OF SYSTEMIC LUPUS ERYTHEMATOSUS 1105
■ *Steven M. Edworthy*
75. MANAGEMENT OF SYSTEMIC LUPUS ERYTHEMATOSUS 1125
■ *Bevra Hannahs Hahn*
76. ANTIPHOSPHOLIPID ANTIBODY SYNDROME 1145
■ *Michael D. Lockshin*
-

Section XI VASCULITIC SYNDROMES

77. CLASSIFICATION OF VASCULITIS 1153
■ *John S. Sargent*
78. GIANT CELL ARTERITIS AND POLYMYALGIA RHEUMATICA 1155
■ *Gene G. Hunder*

79. VASCULITIS ASSOCIATED WITH ANTINEUTROPHIL CYTOPLASMIC ANTIBODY 1165
■ *Leonard H. Calabrese*
■ *George Duna*
80. POLYARTERITIS AND RELATED DISORDERS 1185
■ *John S. Sergent*
81. HYPERSENSITIVITY VASCULITIS (SMALL-VESEL CUTANEOUS VASCULITIS) 1197
■ *Emilio B. Gonzalez*
■ *Doyt L. Conn*
82. BEHÇET'S DISEASE 1205
■ *Jayashri V. Ghate*
■ *Joseph L. Jorizzo*
-

Section XII SCLERODERMA AND MIXED CONNECTIVE TISSUE DISEASES

83. SCLERODERMA 1211
■ *James R. Seibold*
84. MIXED CONNECTIVE TISSUE DISEASE AND OTHER OVERLAP SYNDROMES 1241
■ *Robert M. Bennett*
-

Section XIII STRUCTURE, FUNCTION, AND DISEASE OF MUSCLE

85. SKELETAL MUSCLE 1261
■ *Yale E. Goldman*
■ *Jody A. Dantzig*
86. INFLAMMATORY DISEASES OF MUSCLE AND OTHER MYOPATHIES 1273
■ *Robert L. Wortmann*
-

Section XIV RHEUMATIC DISEASES OF CHILDHOOD

87. JUVENILE RHEUMATOID ARTHRITIS 1297
■ *James T. Cassidy*
88. SYSTEMIC LUPUS ERYTHEMATOSUS, JUVENILE DERMATOMYOSITIS, SCLERODERMA, AND VASCULITIS 1315
■ *James T. Cassidy*
-

Section XV CRYSTAL-ASSOCIATED SYNOVITIS

89. GOUT AND HYPERURICEMIA 1339
■ *Robert L. Wortmann*
■ *William N. Kelley*

90. DISEASES ASSOCIATED WITH DEPOSITION OF CALCIUM PYROPHOSPHATE OR HYDROXYAPATITE **1377**
■ *Antonio J. Reginato*
■ *Anthony M. Reginato*
-

Section XVI
OSTEOARTHRITIS, POLYCHONDritis, AND HERITABLE DISORDERS

91. PATHOGENESIS OF OSTEOARTHRITIS **1391**
■ *Henry J. Mankin*
■ *Kenneth D. Brandt*
92. CLINICAL FEATURES OF OSTEOARTHRITIS **1409**
■ *Louis Solomon*
93. MANAGEMENT OF OSTEOARTHRITIS **1419**
■ *Kenneth D. Brandt*
94. HERITABLE DISORDERS OF STRUCTURAL PROTEINS **1433**
■ *Jay R. Shapiro*
95. RELAPSING POLYCHONDritis **1463**
■ *Marc C. Hochberg*
-

Section XVII
ARTHRITIS RELATED TO INFECTION

96. BACTERIAL ARTHRITIS **1469**
■ *Don L. Goldenberg*
97. LYME DISEASE **1485**
■ *Leonard H. Sigal*
98. MYCOBACTERIAL AND FUNGAL INFECTIONS **1493**
■ *J. Timothy Harrington*
99. RHEUMATIC MANIFESTATIONS OF HUMAN IMMUNODEFICIENCY VIRUS INFECTION **1507**
■ *John D. Reveille*
100. VIRAL ARTHRITIS **1519**
■ *Stanley J. Naides*
101. ACUTE RHEUMATIC FEVER **1529**
■ *Ralph C. Williams, Jr.*
-

Section XVIII
ARTHRITIS ACCOMPANYING SYSTEMIC DISORDERS

102. AMYLOIDOSIS **1541**
■ *Martha Skinner*
103. SARCOIDOSIS **1551**
■ *W. Winn Chatham*

104. IRON STORAGE DISEASE **1559**
■ *R. Elaine Lambert*
105. HEMOPHILIC ARTHROPATHY **1567**
■ *Katherine S. Upchurch*
■ *Doreen B. Brettler*
106. HEMOGLOBINOPATHIES AND ARTHRITIS **1575**
■ *H. Ralph Schumacher, Jr.*
107. ARTHRITIS ACCOMPANYING ENDOCRINE AND METABOLIC DISORDERS **1581**
■ *John S. Sargent*
108. HYPERTROPHIC OSTEOARTHROPATHY **1589**
■ *Roy D. Altman*
■ *Jerry Tenenbaum*
109. MUSCULOSKELETAL SYNDROMES IN MALIGNANCY **1595**
■ *Mark C. Genovese*
-

Section XIX
DISORDERS OF BONE AND STRUCTURAL PROTEIN

110. BIOLOGY, PHYSIOLOGY, AND MORPHOLOGY OF BONE **1611**
■ *Clinton T. Rubin*
■ *Janet E. Rubin*
111. METABOLIC BONE DISEASE **1635**
■ *Miriam F. Delaney*
■ *Meryl S. LeBoff*

112. OSTEONECROSIS **1653**
 ■ *E. Scott Frankel*
 ■ *James R. Urbaniak*
-

Section XX
TUMORS INVOLVING JOINTS

113. TUMOR AND TUMOR-LIKE LESIONS OF JOINTS AND RELATED STRUCTURES **1667**
 ■ *Andrew Rosenberg*
-

Section XXI
RECONSTRUCTIVE SURGERY FOR RHEUMATIC DISEASE

114. INTRODUCTION TO SURGICAL MANAGEMENT OF PATIENTS WITH ARTHRITIS **1691**
 ■ *Clement B. Sledge*
115. PRINCIPLES OF RECONSTRUCTIVE SURGERY **1699**
 ■ *Clement B. Sledge*
- The Hand and Wrist **1699**
 The Elbow **1718**
 The Shoulder **1728**
 The Cervical Spine **1736**
 The Hip **1743**
 ■ *Clement B. Sledge*
 and Chitranjan S. Ranawat
- The Knee **1759**
 The Ankle and Foot **1769**
 The Surgical Management of Juvenile Rheumatoid Arthritis **1781**
- INDEX **i**